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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,224	07/08/2003	Shingo Eguchi	0756-7174	7272

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EXAMINER	
AKKAPEDDI, PRASAD R	
ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/614,224	EGUCHI ET AL.	
	Examiner	Art Unit	
	Prasad R Akkapeddi	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/08/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamatani et al. (Tamatani) (U.S.Patent No. 5,893,625).

As to claim 1: Tamatani discloses a method of manufacturing a liquid crystal display device (title), having a pair of substrates (1a and 1b) sandwiching a seal pattern (2) (Fig. 1), injecting a liquid crystal between the pair of substrates through an opening of the seal pattern (3) and the opening (3) being positioned apart from a panel region (panel region being the where the display electrodes (16 and 17) and the pixel area are located (col. 4, lines 17-37). Tamatani also discloses a cutting position (severing) along a line (6) drawn between the opening (3) and the panel region as shown in (Fig. 1).

As to claims 2 and 3: Tamatani discloses a method of manufacturing a liquid crystal display device (title), with a liquid crystal interposed between a pair of substrates (1a and 1b), forming a seal pattern (2) with an opening (3) positioned apart from a panel region (panel region being the where the display electrodes (16 and 17) and the pixel area are located (col. 4, lines 17-37), bonding of the substrates (col.5, lines 6-7), a first severance treatment (cutting

line, 5), injection of the liquid crystal through the opening (3) and a second severance treatment (cutting line,6) along a line drawn between the opening (3) and the panel region as shown in (Fig. 1).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamatani in view of Nakahara et al. (Nakahara) (U.S.Patent No. 6,239,855).

As to claims 4-6: Tamatani teaches the use of cut lines (5 and 6) to cut the substrates. Although scribing and then cutting to severe the substrates commonly accomplish this, Tamatani does not explicitly teach that the method of severance treatment includes scribing to cut off.

Nakahara in disclosing a method of producing a liquid crystal display panel teaches the use of scribing and a break or cut off process (col. 2, lines 55-57, col. 4, lines 1-2 and elsewhere).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the scribing and cut off process as disclosed by Nakahara to the liquid crystal display device of Tamatani in order

to prevent cell gap non-uniformity or a crack in the substrate from occurring in the severing process (col. 2, lines 35-38).

5. Claims 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamatani in view of Hirakata et al. (Hirakata) (U.S.Patent Application Publication 2002/0024621)

As to claims 7-12: Tamatani's teachings include a broad category of liquid crystal materials and is not limited to smectic ferroelectric liquid crystals alone. However, Tamatani is silent on the application to smectic ferroelectric liquid crystals.

Hirakata in disclosing a method of manufacturing liquid crystal display device, teaches the use of smectic ferroelectric liquid crystal (paragraphs 0002 and 0003).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the smectic ferroelectric liquid crystals to the device of Tamatani in order for the ferroelectric liquid crystal to show hysteresis in a voltage transmittivity characteristic by making the cell gap thinner and also it is known to be a bistable material having a memory property. Hirakata also teaches that such a material characteristics are conventionally utilized and applied in the simple matrix method liquid crystal display device (paragraph 0009).

As to claims 13: Tamatani does not disclose monostabilization treatment.

Hirakata teaches the scribing (step 7) and then followed by monostabilization treatment (step 12) (Fig. 13), as recited in the instant claim.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the monostabilization for eliminating bistable state or hysteresis seen in ferroelectric liquid crystals and obtaining an analog characteristic that fixes transmittivity by an electric field (paragraph 0015).

As to claims 14 and 15: Tamatani does not disclose monostabilization treatment.

Hirakata teaches the scribing (step 7) and then followed by monostabilization treatment (step 12) (Fig. 13), as recited in the instant claims.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the monostabilization for eliminating bistable state or hysteresis seen in ferroelectric liquid crystals and obtaining an analog characteristic that fixes transmittivity by an electric field (paragraph 0015).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 571-272-2285. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prasad R Akkapeddi, Ph.D
Examiner
Art Unit 2871

PRA

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TARIFUR R. CHOWDHURY
PRIMARY EXAMINER